AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) A method for validating a resource record in a local cache at a client computer system within a network, comprising:

retrieving the resource record from the local cache at the client;

issuing one or more queries for the resource record;

waiting for a response to the query; and

if the response to the query is not received in a pre-determined amount of time, invalidating the resource record at the client, wherein invalidating the resource record involves deleting the resource record.

2 (Canceled).

3. (Original) The method of claim 1, further comprising:

receiving a multicast message from a second client querying a second device;

locating a second resource record associated with the second device;

waiting for a multicast response to the multicast query; and

if after a pre-determined number of queries the multicast response to the multicast query is not received in the pre-determined amount of time, invalidating the second resource record.

4. (Original) The method of claim 1, wherein invalidating the resource record further comprises invalidating a child record of the resource record.

5. (Original) The method of claim 1, wherein if the response to the query is not received in a pre-determined amount of time, the method further comprises:

retrieving a parent record of the resource record at the client, wherein the parent record refers to the resource record;

issuing a query for the parent record;

waiting for a response to the query from the device; and

if the response to the query is not received in a pre-determined amount of time, invalidating the parent record, and then repeating the above process by applying it recursively to any records that refer to the now-invalidated parent record.

6. (Original) The method of claim 1, wherein if the response to the query is not received in a pre-determined amount of time, the method further comprises:

retrieving a parent record of the resource record at the client, wherein the parent record refers to the resource record;

issuing a query for the parent record;

receiving a response to the query from the device, wherein the response includes information for updating the resource record; and

updating the resource record with the information received in the response.

7. (Original) The method of claim 6, wherein the method further comprises updating the parent record with the information received in the response.

8. (Original) The method of claim 1, wherein the method is invoked at a pre-specified time interval.

9. (Currently amended) A computer-readable storage medium storing instructions that when executed by a computer cause the computer to perform a method for validating a resource record in a local cache at a client computer system within a network, the method comprising:

retrieving the resource record from the local cache at the client;

issuing one or more queries for the resource record;

waiting for a response to the query; and

if the response to the query is not received in a pre-determined amount of time, invalidating the resource record at the client, wherein invalidating the resource record involves deleting the resource record.

10 (Canceled).

11. (Original) The computer-readable storage medium of claim 9, wherein the method further comprises:

receiving a multicast message from a second client querying a second device;

locating a second resource record associated with the second device;

waiting for a multicast response to the multicast query; and

if after a pre-determined number of queries the multicast response to the multicast query is not received in the pre-determined amount of time, invalidating the second resource record.

12. (Original) The computer-readable storage medium of claim 9, wherein invalidating the resource record further comprises invalidating a child record of the resource record.

13. (Original) The computer-readable storage medium of claim 9, wherein if the response to the query is not received in a pre-determined amount of time, the method further comprises:

retrieving a parent record of the resource record at the client, wherein the parent record refers to the resource record;

issuing a query for the parent record;

waiting for a response to the query from the device; and

if the response to the query is not received in a pre-determined amount of time, invalidating the parent record, and then repeating the above process by applying it recursively to any records that refer to the now-invalidated parent record.

14. (Original) The computer-readable storage medium of claim 9, wherein if the response to the query is not received in a pre-determined amount of time, the method further comprises:

retrieving a parent record of the resource record at the client, wherein the parent record refers to the resource record;

issuing a query for the parent record;

receiving a response to the query from the device, wherein the response includes information for updating the resource record; and

updating the resource record with the information received in the response.

15. (Original) The computer-readable storage medium of claim 14, wherein the method further comprises updating the parent record with the information received in the response.

16. (Original) The computer-readable storage medium of claim 9, wherein the method is invoked at a pre-specified time interval.

17. (Currently amended) An apparatus that validates a resource record in a local cache at a client computer system within a network, comprising:

a retrieval mechanism at the client configured to retrieve the resource record from the local cache at the client; and

an invalidation mechanism configured to,

issue one or more queries for the resource record,

wait for a response to the query, and

if the response to the query is not received in a pre-determined amount of time, to invalidate the resource record at the client, wherein invalidating the resource record involves deleting the resource record.

18 (Canceled).

19. (Original) The apparatus of claim 17, wherein the invalidation mechanism is configured to:

receive a multicast message from a second client querying a second device;

locate a second resource record associated with the second device;

wait for a multicast response to the multicast query; and

if after a pre-determined number of queries the multicast response to the multicast query is not received in the pre-determined amount of time, to invalidate the second resource record.

20. (Original) The apparatus of claim 17, wherein invalidating the resource record further comprises invalidating a child record of the resource record.

21. (Original) The apparatus of claim 17, wherein if the response to the query is not received in a pre-determined amount of time, the invalidation mechanism is additionally configured to:

retrieve a parent record of the resource record at the client, wherein the parent record refers to the resource record;

issue a query for the parent record;

wait for a response to the query from the device; and

if the response to the query is not received in a pre-determined amount of time, to invalidate the parent record, and to then repeat the above process by applying it recursively to any records that refer to the now-invalidated parent record.

22. (Original) The apparatus of claim 17, further comprising an updating mechanism, wherein if the response to the query is not received in a pre-determined amount of time, the updating mechanism is configured to:

retrieve a parent record of the resource record at the client, wherein the parent record refers to the resource record;

issue a query for the parent record;

receive a response to the query from the device, wherein the response includes information for updating the resource record; and to

update the resource record with the information received in the response.

23. (Original) The apparatus of claim 22, wherein the updating mechanism is additionally configured to update the parent record with the information received in the response.

24. (Original) The apparatus of claim 17, wherein the apparatus is invoked at a pre-specified time interval.

25–34. (Canceled)